

AMENDMENTS TO THE CLAIMS

Claims 1-78 (cancelled).

79. (currently amended). A method of enhancing the biological activity of a LH-RH peptide analogue which comprises orally administering to a patient in need thereof a pharmaceutical composition comprising a therapeutically effective amount of a peptide analogue in combination with α -cyclodextrin and excipients suitable for the gastrointestinal delivery of the peptide analogue, wherein the α -cyclodextrin enhances the biological activity of the LH-RH peptide analogue when orally administered,

wherein said peptide analogue has the formula (SEQ ID N°[[1]] 2):

~~A1-A2-A3-A4-A5-A6-A7-A8-Pro-Z (A)~~

A1-His-A3-Ser-A5-A6-A7-Arg-Pro-Z (I)

in which :

- A1 is pGlu, ~~DAla or AcDNal;~~
- ~~A2 is His or D-pClPhe;~~
- A3 is Trp, ~~DPal or DAla;~~
- ~~A4 is Ser;~~
- A5 is Tyr or ~~NicLys;~~
- A6 is Gly, (S)-spiolactam-Pro, DAla, DLeu, DPhe, DTrp, ~~DNpg, DNal, DNicLys, DCit, DHCit, DAsn, DHArg,~~
or DSer(OBu^t) or DHis which is unsubstituted or
~~substituted on the imidazole ring by a benzyl group;~~
- A7 is Leu, ~~Ada or Npg, where said amino acid is~~
~~unsubstituted or N-alpha-substituted by a (C₁-C₄)alkyl~~
~~group;~~

~~—A8 is Arg or IprLys;~~

- Z is GlyNH₂, ~~D-AlaNH₂~~, azaGlyNH₂ or a group -NHR₂ where
R₂ is a ~~(C₁-C₄)alkyl;~~ ethyl;

and wherein the cyclodextrin α -cyclodextrin derivative is selected from the group consisting of methylated α -cyclodextrin, hexakis(2, 3, 6-tri-O-methyl)- α -cyclodextrin, carboxymethylated, α -cyclodextrin and phosphated α -cyclodextrin.

80. (canceled)

81. (canceled)

82. (currently amended) The method according to claim [[80]] 79 wherein the peptide analogue is selected from the group consisting of leuprorelin, [Npg⁷]-leuprorelin, triptorelin, [Npg⁷]-triptorelin, goserelin, [Npg⁷]-goserelin, buserelin and [Npg⁷]-buserelin.

83. (canceled)

84. (previously presented) The method according to claim 79 wherein the α -cyclodextrin derivative is hexakis(2, 3, 6-tri-O-methyl)- α -cyclodextrin.

85. (previously presented) The method according to claim 79 wherein the pharmaceutical composition is intended for the treatment of infertility, hypogonadic or hypergonadic states.

86. (previously presented) The method according to claim

79 wherein the pharmaceutical composition is a contraceptive agent.

87. (previously presented) The method according to claim 79 wherein the pharmaceutical composition is intended for the treatment or prevention of prostate cancer or benign prostatic hypertrophy.

88. (previously presented) The method according to claim 79 wherein the pharmaceutical composition is intended for the treatment or prevention of breast cancer.

89. (previously presented) The method according to claim 79 wherein the pharmaceutical composition is intended for the treatment or prevention of sex hormone-related benign or malignant tumors.

90. (previously presented) The method according to claim 79 wherein the pharmaceutical composition is intended for the treatment or prevention of sex hormone-independent but LH-RH sensitive benign or malignant tumors.

91. (previously presented) The method according to claim 79 wherein the pharmaceutical composition is intended for the treatment or prevention of benign or malignant lymphoproliferative disorders.

92. (currently amended) A pharmaceutical composition for the gastrointestinal delivery by oral administration of an LH-RH peptide analogue, said composition comprising a therapeutically effective amount of a peptide analogue in combination with α -cyclodextrin and excipients suitable for

the gastrointestinal delivery of the peptide analogue, wherein the α -cyclodextrin enhances the biological activity of the LH-RH peptide analogue when orally administered, said LH-RH peptide analogue having the formula (SEQ ID N°[[1]] 2):

~~A1-A2-A3-A4-A5-A6-A7-A8-Pro-Z~~ (A)

A1-His-A3-Ser-A5-A6-A7-Arg-Pro-Z (I)

in which :

- A1 is pGlu, ~~DAla or AcDNal~~;
- ~~A2 is His or D-pClPhe~~;
- A3 is Trp, ~~DPal or DAla~~;
- ~~A4 is Ser~~;
- A5 is Tyr ~~or NicLys~~;
- A6 is Gly, (S)-spirolactam-Pro, DAla, DLeu, DPhe, DTrp, ~~DNpg, DNal, DNicLys, DCit, DHCit, DAsn, DHArg, or DSer(OBu^t) or DHis which is unsubstituted or substituted on the imidazole ring by a benzyl group~~;
- A7 is Leu, ~~Ada or Npg, where said amino is unsubstituted or N-alpha-substituted by a (C₁-C₄)alkyl group~~;
- ~~A8 is Arg or IprLys~~;
- Z is GlyNH₂, D-AlaNH₂, ~~azaGlyNH₂~~-or a group -NHR₂ where R₂ ~~is a (C₁-C₄)alkyl ethyl~~;

and wherein the α -cyclodextrin derivative is selected from the group consisting of methylated α -cyclodextrin, hexakis(2, 3, 6-tri-O-methyl)- α -yclodextrin, carboxymethylated α -cyclodextrin and phosphated α -cyclodextrin.

93. (canceled)

94. (canceled)

95 (currently amended). The pharmaceutical composition according to claim [[93]] 92 wherein the peptide analogue is selected from the group consisting of leuprorelin, [Npg⁷]-leuprorelin, triptorelin, [Npg⁷]-triptorelin, goserelin, [Npg⁷]-goserelin, buserelin and [Npg⁷]-buserelin.

96. (canceled)

97. (previously presented) The pharmaceutical composition according to claim 92 wherein the α -cyclodextrin derivative is hexakis(2, 3, 6-tri-O-methyl)- α -cyclodextrin.

98. (previously presented) The pharmaceutical composition according to claim 92 which further consists of a protease inhibitor and/or an absorption enhancer.